North American Seasonal Fire Assessment and Outlook

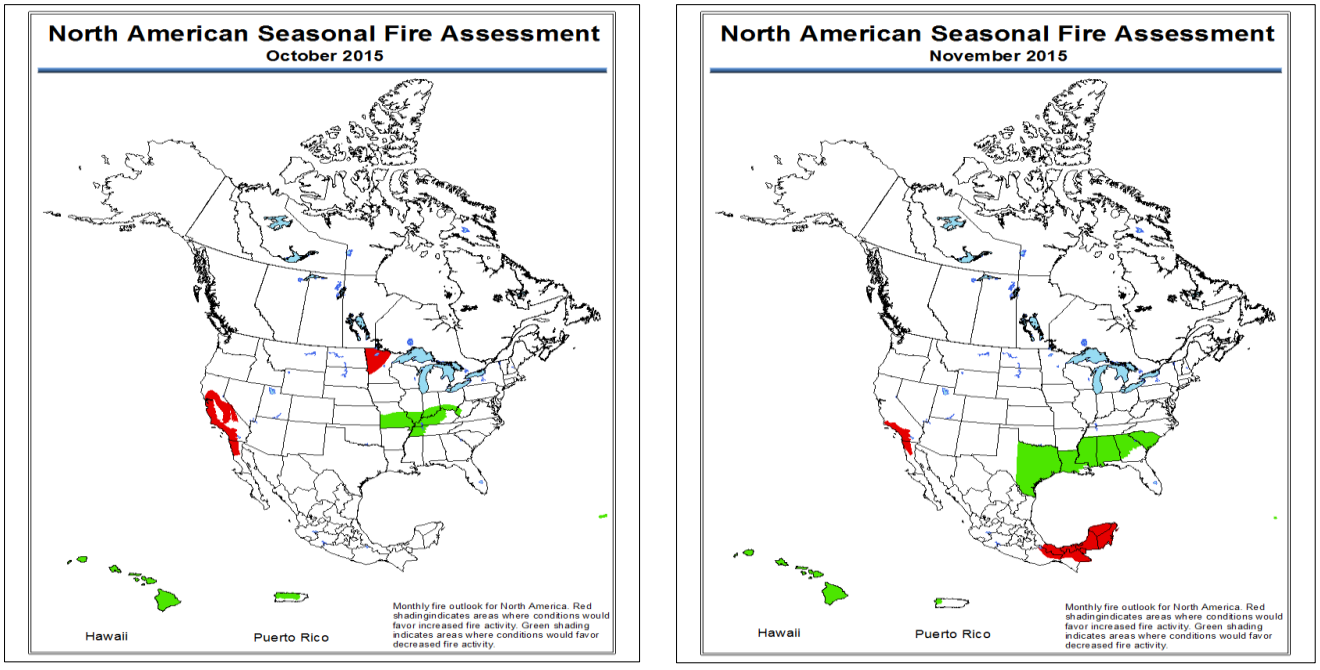
National Interagency Fire Center ● Natural Resources Canada ● Servicio Meteorológico Nacional
United States Canada Mexico

Outlook Period – October and November 2015
Issued on 13 October 2015

Executive Summary

As fall conditions continue to develop, Canada is essentially out of fire season and the potential for additional wildland fire is very low. In the United States, the central and southern mountains of California continue to have some potential for wildland fire activity through October. Also, conditions are favorable for additional wildland fire across parts of northern and western Minnesota. Generally, most of the U.S. is out of fire season but some fire activity is possible where dry fuels and dry weather are present. However, those fires are typically of short duration. In Mexico, fire potential remains elevated in the northern portion of Baja California.

The seasonal fire outlook for November suggests conditions in the United States will remain favorable for continued wildland fire activity along the coastal mountains of southern California. Conditions are favorable for a decrease in wildland fire activity along the Gulf coast region from central Texas to South Carolina. In Mexico, elevated fire potential will continue over northern Baja California and will develop over most of the Yucatan Peninsula, southern Veracruz, northern Oaxaca, and northern Chiapas. Canada is out of fire season.



Monthly fire outlook for North America for October (left) and November (right). Red shading indicates areas where conditions would favor increased fire activity. Green shading indicates areas where conditions would favor decreased fire activity.

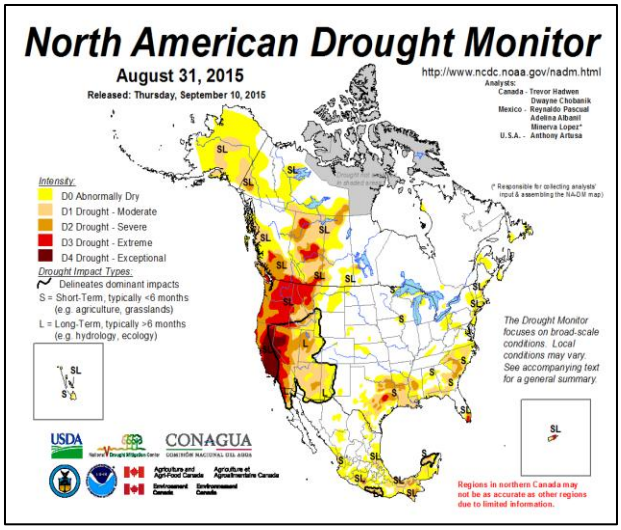
Critical Factors

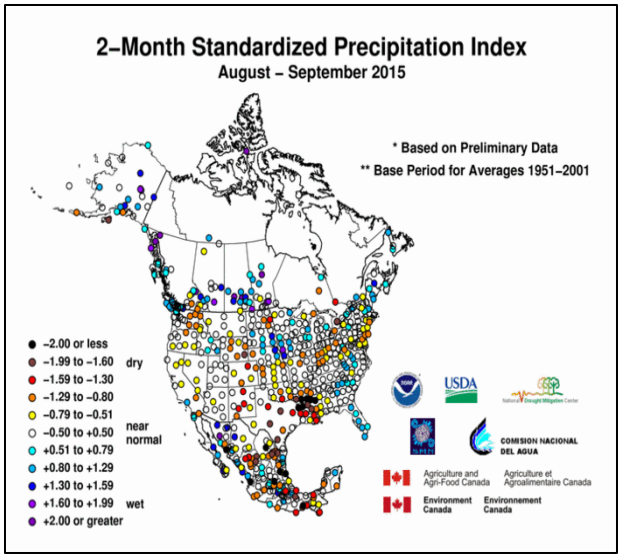
The critical factors influencing significant fire potential for this outlook period are:

El Niño-Southern Oscillation: El Niño conditions (warming of the equatorial Pacific Ocean) are at or near the forecast peak heading into the Northern Hemisphere fall season. October and November mark the end of fire season for Canada and most of the United States. Parts of California could still experience significant fires under the right weather conditions. Mexico is in transition to their dry season in the southern states during the fall and winter months. Precipitation anomalies associated with El Niño will have very large impacts on wildland fire activity during the next year's fire season.

Drought: The North American Drought Monitor from 31 August 2015 (top right) shows severe to exceptional drought over most of the western U.S. with the worst conditions in California, western Nevada, most of Oregon and Washington, and parts of northern Baja California. Pockets of severe to extreme drought continue in southern British Columbia, most of Alberta, and western Saskatchewan. Small pockets of severe drought exist in southern Mexico and in the Gulf states of the U.S.

Fire Season Status: A series of broad troughs migrating across North America coupled with tropical systems and upper level lows contributed to widespread heavy precipitation across much of northern and central Mexico and most of the southern and eastern United States. To a lesser extent, the northern United States and Canada received periods of precipitation as troughs moved across the continent. Fuel conditions moderated across much of the continent both from the precipitation and from seasonal factors. Despite the precipitation, some areas remain quite dry and could support some short term fire activity.





Top: North American Drought Monitor from 31 July 2015. **Bottom:** 2-month Standardized Precipitation Index for June-July 2015. (Both *from U.S National Centers for Environmental Information, NCEI/NOAA)*

Canada Discussion

October: Above-average conditions are present in southern British Columbia and parts of northern Alberta as the fall sets in. El Niño conditions will extend through fall in western Canada but it is unlikely this will result in any significant fire activity as the country transitions into winter.

November: Winter conditions are expected throughout Canada. Western Canada is expected to receive above average temperatures and below normal snow amounts as El Niño conditions persist through the winter. This will contribute to an early start to the 2016 fire season. Eastern Canada may

similarly experience a warmer winter due to El Niño though precipitation should be sufficient to recharge the moisture levels in the forest floor.

United States Discussion

October: Fire potential will remain high across the mountains of southern and central California. October is typically the season for offshore flow patterns which can spread fires rapidly in the region. Long-term drought conditions have left fuels extremely dry but recent scattered rains have mitigated the fire potential slightly. Dry conditions across northern and western Minnesota will keep fire potential elevated, especially during windy periods associated with cold fronts. However, these conditions should also decrease as fronts become increasing wetter. The rest of the country is typically out of fire season but some short duration fires are always possible during the dry fall months associated with cured grasses or with autumn leaf fall.

November: The potential for significant wildfires will continue to decrease across the country as conditions transition quickly into winter. California's far southern mountains remain in elevated significant fire potential for November. Rainfall is expected to increase as El Niño conditions continue through the winter. Offshore wind events are less likely during El Niño events but not completely eliminated. Precipitation during the month will be the mitigating factor. The rest of the country is typically out of fire season in November but some small duration fires are possible in dry grasses and leaf litter during the fall and early winter months.

Mexico Discussion

October: Near normal precipitation anomalies are expected for October over the majority of the country. The retreat of the monsoon rains is underway but rainfall in September along with expected precipitation through October will keep soils and fuels wet enough to expect a near normal fire potential for the month. Northern Baja California is an exception since it has been experiencing long-lasting severe drought (D3) conditions and several fires were reported during the past month. This will result in the continuation of above normal fire potential for October. However, northwestern Mexico typically experiences the end of its fire season in October so it is possible to see a slight recovery by the end of this month.

November: November is expected to see normal conditions for most of the country. The IRI Multi-model seasonal probability forecast (October-November-December) suggests precipitation probabilities above normal for northern and northwestern Mexico. Temperatures are expected to be above normal for eastern Mexico but with drier-than-normal conditions indicating above normal fire potential across the southern states of Chiapas, northern Oaxaca, southern Veracruz, Quintana Roo, Campeche and Yucatan. Northeastern Mexico will likely see below normal temperatures and above normal precipitation.

The El Niño pattern will likely increase the number and frequency of cold frontal passages through the rest of country, bringing cooler and wetter conditions to northern Mexico and central Mexico. These conditions should reduce fuel availability and keep fire potential at normal levels for the month.

Additional Information

Additional and supplemental information for this outlook can be obtained at:

United States:
National Significant Wildland Fire Potential Outlook
http://www.predictiveservices.nifc.gov/outlooks/monthly_seasonal_outlook.pdf

Canada:
Canadian Wildland Fire Information System

http://cwfis.cfs.nrcan.gc.ca/home

Mexico:
Servicio Meteorológico Nacional
http://smn.cna.gob.mx/index.php?option=com_content&view=article&id=156&Itemid=113

Outlook Objective

The North American Seasonal Fire Assessment and Outlook is a general discussion of conditions that will affect the occurrence of wildland fires across Canada, the United States, and Mexico. Wildland fire is a natural part of many ecosystems across North America. This document provides a broad assessment of those factors that will contribute to an increase or decrease of seasonal fire activity. The objective is to assist wildland fire managers prepare for the potential variations in a typical fire season. It is not intended as a prediction of where and when wildland fires will occur nor is it intended to suggest any area is safe from the hazards of wildfire.

Acknowledgements

Contributions to this document were made by:

Canada: Kerry Anderson, Natural Resources Canada
Richard Carr, Natural Resources Canada

United States: Ed Delgado, Predictive Services, Bureau of Land Management
Jeremy Sullens, Predictive Services, USDA Forest Service
Coleen Haskell, Predictive Services, USDA Forest Service

Mexico: Hector Robles, Servicio Meteorológico Nacional
Juan Carlos Ramos, Servicio Meteorológico Nacional
Yesenia Alejandro, Servicio Meteorológico Nacional
Angel Teran, Servicio Meteorológico Nacional
Dario Rodriguez, Servicio Meteorológico Nacional